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PATENT & TRADEMARK OFFICE

PATENT



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Cheng LEE *et al.*

Serial No.: 10/047,759

Filed: January 15, 2002

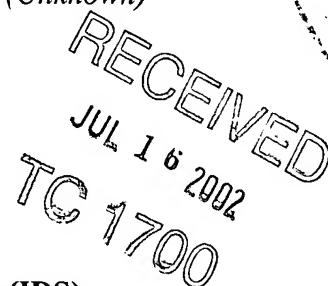
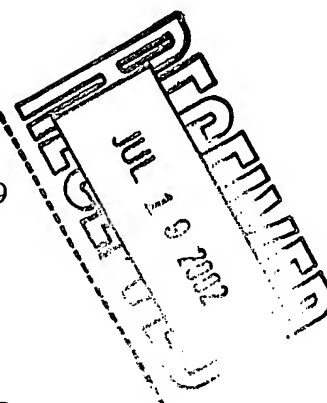
For: MICROFLUIDIC APPARATUS FOR PERFORMING
GEL PROTEIN EXTRACTIONS AND METHODS
FOR USING THE APPARATUS

Docket No.: 23480-501

Confirmation No.: 5139

Group Art Unit: 1743

Examiner: (Unknown)

**INFORMATION DISCLOSURE STATEMENT (IDS)**Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Pursuant to the duty of disclosure under 37 C.F.R. §§ 1.56, 1.97 and 1.98, Applicants hereby make of record in the above-identified application the documents listed on the attached Form PTO-1449.

Applicants have listed publication dates on the attached PTO-1449 based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior

art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

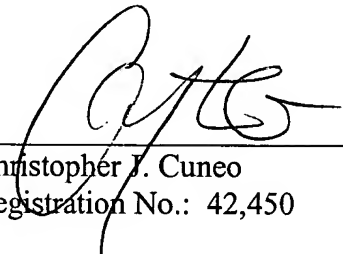
This Information Disclosure Statement is being filed before the mailing date of a first Office Action on the merits. No certification or fee is required. 37 C.F.R. 1.97(b).

It is respectfully requested that the Examiner initial and return a copy of the enclosed PTO-1449.

Respectfully submitted,

MINTZ, LEVIN, COHN, FERRIS, GLOVSKY
and POPEO, P.C.

By



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Attorney for Applicants

Dated: July 10, 2002

INFORMATION DISCLOSURE CITATION IN AN APPLICATION Form PTO-1449	Docket Number	Application Number
	23480-501	10/047,759
	Applicant(s)	
	Cheng LEE <i>et al.</i>	
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U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	1A	4,576,702	03/18/1986	Peck <i>et al.</i>	204	299	
	1B	5,102,518	04/07/1992	Doering <i>et al.</i>	204	180.1	
	1C	5,217,591	06/08/1993	Gombocz <i>et al.</i>	204	299	
	1D	5,275,710	01/04/1994	Gombocz <i>et al.</i>	204	299	
	1E	5,505,831	04/09/1996	Liao <i>et al.</i>	204	451	
	1F	5,541,420	07/30/1996	Kambara	204	602	
	1G	5,587,062	12/24/1996	Togawa <i>et al.</i>	204	613	

FOREIGN PATENT DOCUMENTS

REF	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translations	
						YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

1H	HILLENKAMP <i>et al.</i> , "Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry of Biopolymers", <u>Analytical Chemistry</u> , Volume 63, No. 24, December 15, 1991, pages 1193A-1202A.	✓
1I	FENSELAU, "MALDI-MS and Strategies for Protein Analysis", <u>Analytical Chemistry News & Features</u> , Volume 69, November 1, 1997, pages 661A-665A.	✓
1J	KEBARLE <i>et al.</i> , "From Ions in Solution to Ions in the Gas Phase—The Mechanism of Electrospray Mass Spectrometry", <u>Analytical Chemistry</u> , Volume 65, No. 22, November 15, 1993, pages 972A-986A.	✓
1K	YATES, III, "Special Feature: Tutorial: Mass Spectrometry and the Age of the Proteome", <u>Journal of Mass Spectrometry</u> , Volume 33, 1998, pages 1-19.	✓
1L	KLOSE <i>et al.</i> , "Two-Dimensional Electrophoresis of Proteins: An Updated Protocol and Implications for a Functional Analysis of the Genome", <u>Electrophoresis</u> , Volume 16, 1995, pages 1034-1059.	✓
1M	JUNGBLUT <i>et al.</i> , "Resolution Power of Two-Dimensional Electrophoresis and Identification of Proteins from Gels", <u>Electrophoresis</u> , Volume 17, 1996, pages 839-847.	✓
1N	RABILLOU, "Detecting Proteins Separated by 2-D Gel Electrophoresis", <u>Analytical Chemistry</u> , Volume 72, January 1, 2000, pages 48A-55A.	✓
1O	SHEVCHENKO <i>et al.</i> , "Mass Spectrometric Sequencing of Proteins from Silver-Stained Polyacrylamide Gels", <u>Analytical Chemistry</u> , Volume 68, No. 5, March 1, 1996, pages 850-858.	✓
1P	SHEVCHENKO <i>et al.</i> , "Linking Genome and Proteome by Mass Spectrometry: Large-Scale Identification of Yeast Proteins from Two Dimensional Gels", <u>Proc. Natl. Acad. Sci. USA</u> , Volume 93, December 1996, pages 14440-14445.	✓
1Q	GYGI <i>et al.</i> , "Evaluation of Two-Dimensional Gel Electrophoresis-Based Proteome Analysis Technology", <u>Proc. Natl. Acad. Sci. USA</u> , Volume 97, No. 17, August 15, 2000, pages 9390-9395.	✓

EXAMINER	DATE CONSIDERED
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.	



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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	2A	SMITH, "Probing Proteomes—Seeing the Whole Picture?", <u>Nature Biotechnology</u> , Volume 18, October 2000, pages 1041-1042. ✓
	2B	BURGI <i>et al.</i> , "Optimization in Sample Stacking for High-Performance Capillary Electrophoresis", <u>Analytical Chemistry</u> , Volume 63, No. 18, September 15, 1991, pages 2042-2047. ✓
	2C	CHIEN <i>et al.</i> , "On-Column Sample Concentration Using Field Amplification in CZE", <u>Analytical Chemistry</u> , Volume 64, No. 8, April 15, 1992, pages 489A-496A. ✓
	2D	CHIEN <i>et al.</i> , "Sample Stacking of an Extremely Large Injection Volume in High-Performance Capillary Electrophoresis", <u>Analytical Chemistry</u> , Volume 64, No. 9, May 1, 1992, pages 1046-1050. ✓
	2E	BURGI <i>et al.</i> , "On-Line Sample Preconcentration for Capillary Electrophoresis", in <u>Handbook of Capillary Electrophoresis</u> , Edited by James P. Landers, CRC Press, 1997, pages 479-493. ✓
	2F	RAMSEY <i>et al.</i> , "Generating Electrospray from Microchip Devices Using Electroosmotic Pumping", <u>Analytical Chemistry</u> , Volume 69, No. 6, March 15, 1997, pages 1174-1178. ✓
	2G	OLESCHUK <i>et al.</i> , "Analytical Microdevices for Mass Spectrometry", <u>Trends in Analytical Chemistry</u> , Volume 19, No. 6, 2000, pages 379-388. ✓
	2H	GATLIN <i>et al.</i> , "Protein Identification at the Low Femtomole Level from Silver-Stained Gels Using a New Fritless Electrospray Interface for Liquid Chromatography—Microspray and Nanospray Mass Spectrometry", <u>Analytical Biochemistry</u> , Volume 263, 1998, Article No. AB982809, pages 93-101. ✓
	2I	SCHELER <i>et al.</i> , "Peptide Mass Fingerprint Sequence Coverage from Differently Stained Proteins on Two-Dimensional Electrophoresis Patterns by Matrix Assisted Laser Desorption/Ionization-Mass Spectrometry (MALDI-MS)", <u>Electrophoresis</u> , Volume 19, 1998, pages 918-927. ✓
	2J	RAMSAMOOJ <i>et al.</i> , "Differential Expression of Proteins in Radioresistant and Radiosensitive Human Squamous Carcinoma Cells", <u>Journal of the National Cancer Institute</u> , Volume 84, No. 8, April 15, 1992, pages 622-628. ✓
	2K	WILKINS <i>et al.</i> , "Proteome Research: New Frontiers in Functional Genomics", Published by Springer, Berlin, 1997, pages 187-219. ✓

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**INFORMATION DISCLOSURE CITATION
IN AN APPLICATION**

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

3A	OSTERGAARD <i>et al.</i> , "Psoriasin (S100A7): A Putative Urinary Marker for the Follow-Up of Patients with Bladder Squamous Cell Carcinomas", <u>Electrophoresis</u> , Volume 20, 1999, 349-354.	✓
3B	PAGE <i>et al.</i> , "Proteomic Definition of Normal Human Luminal and Myoepithelial Breast Cells Purified from Reduction Mammoplasties", <u>Proc. Natl. Acad. Sci. USA</u> , Volume 96, No. 22, October 26, 1999, pages 12589-12594.	✓
3C	WILM <i>et al.</i> , "Femtomole Sequencing of Proteins from Polyacrylamide Gels by Nano-Electrospray Mass Spectrometry", <u>Nature</u> , Volume 379, February 1, 1996, pages 466-469.	✓
3D	LOTTSPEICH, "Proteome Analysis: A Pathway to the Functional Analysis of Proteins", <u>Angew. Chem. Int. Ed.</u> , Volume 38, 1999, pages 2476-2492.	✓
3E	PANDEY <i>et al.</i> , "Proteomics to Study Genes and Genomes", <u>Nature</u> , Volume 405, June 15, 2000, pages 837-846.	✓
3F	BINZ <i>et al.</i> , "A Molecular Scanner to Automate Proteomic Research and to Display Proteome Images", <u>Analytical Chemistry</u> , Volume 71, No. 21, November 1, 1999, pages 4981-4988.	✓
3G	BIENVENUT <i>et al.</i> , "Toward a Clinical Molecular Scanner for Proteome Research: Parallel Protein Chemical Processing Before and During Western Blot", <u>Analytical Chemistry</u> , Volume 71, No. 21, November 1, 1999, pages 4800-4807.	✓
3H	HJERTEN <i>et al.</i> , "Adaptation of the Equipment for High-Performance Electrophoresis to Isoelectric Focusing", <u>Journal of Chromatography</u> , Volume 346, 1985, pages 265-270.	✓
3I	HJERTEN <i>et al.</i> , "Carrier-Free Zone Electrophoresis, Displacement Electrophoresis, and Isoelectric Focusing in a High-Performance Electrophoresis Apparatus", <u>Journal of Chromatography</u> , Volume 403, 1987, pages 47-61.	✓
3J	KILAR <i>et al.</i> , "Fast and High Resolution Analysis of Human Serum Transferrin by High Performance Isoelectric Focusing in Capillaries", <u>Electrophoresis</u> , Volume 10, 1989, pages 23-29.	✓
3K	YEFIMOV <i>et al.</i> , "Transfer of SDS-Proteins from Gel Electrophoretic Zones into Mass Spectrometry, Using Electroelution of the Band into Buffer Without Sectioning of the Gel", <u>Journal of Biochemical and Biophysical Methods</u> , Volume 42, 2000, pages 65-78.	✓
3L	YEFIMOV <i>et al.</i> , "Recovery of Sodium Dodecyl Sulfate-Proteins from Gel Electrophoretic Bands in a Single Electroelution Step for Mass Spectrometry Analysis", <u>Analytical Biochemistry</u> , Volume 284, 2000, pages 288-295.	✓

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